

AMENDMENT TO THE CLAIMS

Claim 1 (original): A method of inspecting and/or characterizing a substrate, comprising:

obtaining a first dataset, wherein said first dataset includes data derived from an image collected by a first detector of a first region of said substrate;

obtaining a second dataset, wherein said second dataset includes data derived from an image collected by a second detector of at least a portion of said first region of said substrate;

obtaining a third dataset, wherein said third dataset includes data derived from an image collected by said first detector from a second region of said substrate, wherein said second region of said substrate is expected to be substantially identical to said first region;

obtaining a fourth dataset, wherein said fourth dataset includes data derived from an image collected by said second detector of at least a portion of said second region of said substrate; and

processing information derived from said first, second, third and fourth datasets to determine whether a defect exists in at least one of said first or second regions.

Claim 2 (original): The method of Claim 1 wherein the step of processing information comprises:

calculating the difference signal for each pixel with said first detector, calculating the difference signal for each pixel with said second detector, performing a mathematical operation on the two difference signals, and comparing the result of said operation with a threshold.

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (cancelled)

Claim 6 (cancelled)

Claim 7 (cancelled)

Claim 8 (cancelled)

Claim 9 (cancelled)

Claim 10 (cancelled)

Claim 11 (cancelled)

Claim 12 (cancelled)

Claim 13 (cancelled)

Claim 14 (cancelled)

Claim 15 (cancelled)

Claim 16 (cancelled)

Claim 17 (original): The method of Claim 1, wherein said information is processed by combining a first function representing a comparison of said first and third datasets with a second function representing a comparison of said second and fourth datasets.

Claim 18 (original): The method of Claim 17, wherein said comparison is an image subtraction.

Claim 19 (original): The method of Claim 17, wherein said combination represents a third function including summing said first function squared with said second function squared.

Claim 20 (original): The method of Claim 17, wherein said combination is compared against a predetermined range of values to determine whether a defect exists.

Claim 21 (cancelled)

Claim 22 (cancelled)

Claim 23 (cancelled)

Claim 24 (cancelled)

Claim 25 (cancelled)

Claim 26 (cancelled)

Claim 27 (cancelled)

Claim 28 (original): The method of Claim 20, wherein at least two portions of said substrate are exposed to said particles, and wherein said detectors are used to detect charged particles emitted from said portions, and wherein data from said detectors is used to determine whether potential defects exist within said portions.

Claim 29 (cancelled)

Claim 30 (cancelled)

Claim 31 (cancelled)

Claim 32 (cancelled)

Claim 33 (cancelled)

Claim 34 (cancelled)

Claim 35 (cancelled)

Claim 36 (cancelled)

Claim 37 (cancelled)

Claim 38 (cancelled)

Claim 39 (cancelled)

Claim 40 (cancelled)

Claim 41 (cancelled)

Claim 42 (cancelled)

Claim 43 (cancelled)

Claim 44 (cancelled)

Claim 45 (cancelled)

Claim 46 (cancelled)

Claim 47 (cancelled)

Claim 48 (cancelled)